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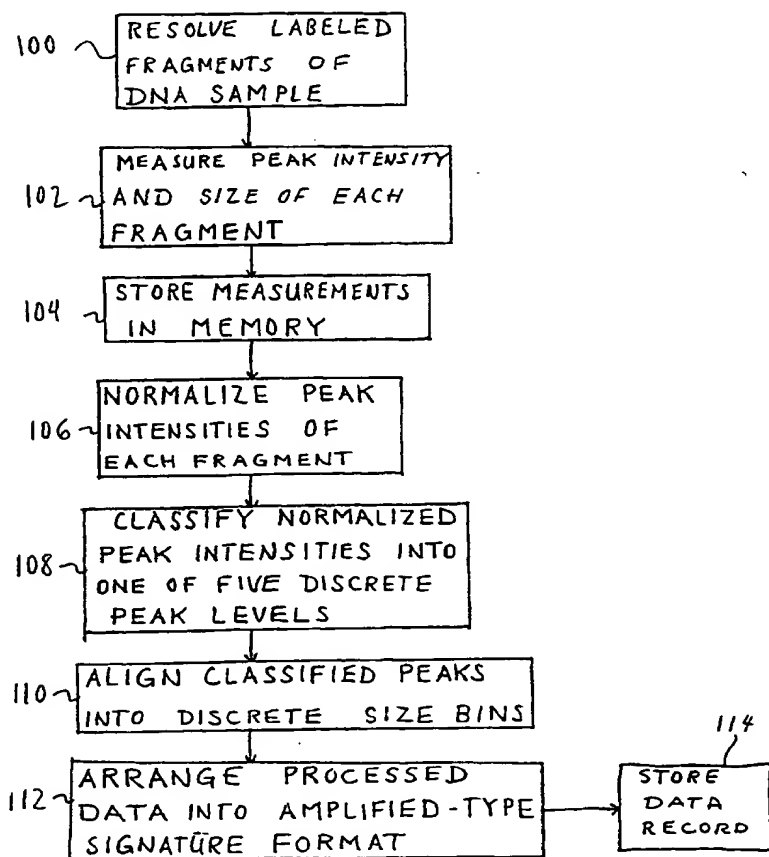
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- (21) International Application Number: **PCT/SG99/00087**
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[Continued on next page]

(54) Title: **DNA MARKER PROFILE DATA ANALYSIS**



(57) Abstract: A method for converting raw DNA marker profile data into an easily understood, standardized format in which the location and relative intensity of every marker is sufficiently represented. Raw DNA marker profile data is analyzed to classify peak intensities into discrete intensity levels, and a binning algorithm is used to align the sizes or positions of sequence fragments into discrete integer sizes. A reward-penalty system is used to score comparisons of DNA fingerprint records.

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**Published:**

— *With international search report.*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>GM/MC/R33-76</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/SG 99/ 00087</b>	International filing date (day/month/year) <b>21/08/1999</b>	(Earliest) Priority Date (day/month/year)
Applicant <b>INSTITUTE OF MOLECULAR AGROBIOLOGY et al.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

### 1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

### 4. With regard to the title,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

### 5. With regard to the abstract,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

### 6. The figure of the drawings to be published with the abstract is Figure No.



as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.

1



None of the figures.

# INTERNATIONAL SEARCH REPORT

National Application No

PCT/SG 99/00087

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G06F19/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 497 468 A (BECKMAN INSTRUMENTS INC) 5 August 1992 (1992-08-05)	1-5, 12, 17
Y	abstract; claims 1-11	6, 7, 13, 14
Y	WO 97 27317 A (CHEE MARK ; LAI CHAOQIANG (US); LEE DANNY (US); AFFYMETRIX INC (US)) 31 July 1997 (1997-07-31) page 48, paragraph 1 - paragraph 3 page 84, paragraph 4 - page 85, paragraph 1	6, 7, 13, 14
A	US 5 754 524 A (WARK BARRY J) 19 May 1998 (1998-05-19) abstract; claims 1, 2, 6	1-17

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

24 May 2000

Date of mailing of the international search report

31/05/2000

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# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/SG 99/00087

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>WO 98 40395 A (TAYLOR PAUL D ;GJERDE DOUGLAS T (US); TRANSGENOMIC INC (US)) 17 September 1998 (1998-09-17) abstract</p> <p>-----</p>	1-17

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/SG 99/00087

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
EP 0497468	A	05-08-1992	US	5098536 A	24-03-1992
			JP	5099898 A	23-04-1993
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WO 9727317	A	31-07-1997	AU	2253397 A	20-08-1997
			EP	0880598 A	02-12-1998
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US 5754524	A	19-05-1998	NONE		
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WO 9840395	A	17-09-1998	AU	6461098 A	29-09-1998
			EP	0984978 A	15-03-2000
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